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The state of graduate training in economics in eastern and southern Africa

Mohamed S. Mukras

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I. Introduction

The need for well-trained economists in government departments, in universities, and in the business sectors in the eastern and southern African region is indisputable. As far as the teaching of economics at universities is concerned, a good master's degree is the very minimum qualification necessary for the execution of the required academic functions. The same qualification is gaining increasing importance in both government and business sectors, where many assignments also call for a graduate with a good master's degree in economics. Graduates with bachelor's degrees are often not adequately prepared to undertake assignments required of them as economists in government, in the business sector, and even more so in the universities.

However, in order to produce a good graduate with a master's degree in economics, several inputs are necessary. Among these are well-qualified and highly motivated lecturers, a good up-to-date library, and good computing facilities. Closely related to these is the incentive structure and the general atmosphere within which the process of learning takes place. The incentive structure needs to be adequate in order to attract and retain the right personnel. In addition, the general atmosphere needs to be conducive to free intellectual interaction.

Practically all the countries in the eastern and southern African region have universities running bachelor's degree programmes in economics. However, only Ethiopia, Kenya, Tanzania, Zambia and Zimbabwe have graduate degree programmes.

These five countries were the ones selected for this study. Available evidence suggests that even though these countries run training programmes in their universities, their governments, business sectors and the universities themselves also often send candidates to various foreign countries to undertake master's and doctorate degree programmes. This has been partly due to the fact that the output of the home university does not match the corresponding demand for MA graduates, and partly that the specialization required for assignments in some government departments and sections of the business sector may not be covered by the local university syllabus. This matching of demand and supply for economics graduates is one of the areas of focus in this study. The others are the nature of the programmes offered, teaching capacity, the existing incentive structure, and the teaching and learning environment.

II. Terms of reference

This study was commissioned by the African Economic Research Consortium (AERC), pursuant to a decision of its Board of Directors. The overall objective of the study was to examine the state of graduate training in economics within the eastern and southern African region, with particular reference to Ethiopia, Kenya, Tanzania, Zambia, and Zimbabwe. The objective has not been to compile an inventory of graduate training programmes and institutions, nor to make precise estimates of manpower requirements. Rather, the consultant was expected to obtain a reasonably good idea of the quality, relevance, and adequacy of current programmes within and outside the region; the immediate and longer term needs; and the likely demands for graduates in economics for teaching, research, and management.

Specifically, the consultant was charged with the following tasks:

1. Examining the conditions affecting graduate training, overall numbers, and annual output of MA and PhD graduates in the countries of the study;
2. Ascertaining the revealed and implied demand for graduates for the purposes of economic research, training, and management from academia, government, and the private sector, and their views as to the responsiveness and relevance of current programmes;
3. In connection with (1) and (2), visiting the five countries concerned in order to obtain such reports, studies, and other pertinent information as may be available, and to interview knowledgeable persons in academia, government, and the private sector. In this regard the consultant was strongly advised to collaborate closely with participants in AERC activities;
4. Preparing a draft report based on the findings that would address the following matters:

   (a) Identify issues and concerns from the perspectives of individual countries, the sub-region, and the region's links to outside institutions and agencies

   (b) Recommend measures to address these concerns in terms of:
   - policies and activities to be undertaken by local and regional entities
   - activities leading to a better rationalization of effort at the sub-regional and regional levels

- activities that could be effectively pursued by AERC, consistent with its mandate and resources
- activities that could be effectively pursued by other external and inter-national agencies
- significant issues meriting further study;

5. Preparing a consolidated draft report with the other two consultants, and presenting this report to a meeting of academics and government officials which was held in Nairobi on 26 and 27 August 1989;
6. Subsequent to this meeting, preparing a joint final report to be presented to the AERC Executive Director not later than 15 September 1989; and
7. Any other activities as mutually agreed upon between the consultant and AERC.

III. Methodology

This study covered five countries in the eastern and southern African region, namely, Ethiopia, Kenya, Tanzania, Zambia, and Zimbabwe. The choice of these countries was dictated by the fact that all of them except Zambia have been running graduate programmes in economics. Although the University of Zambia has temporarily suspended its graduate programme because of staffing problems, it was felt that it would be important to cover Zambia for several reasons. The first was to find out why this programme was suspended. The second was to determine whether there is a demand for graduates in economics in the university, government, and the business sector, and if so, where these sectors currently secure the required graduates. Finally, it was intended to determine a minimum package of inputs that would enable the university to establish a viable graduate degree programme.

Viewing the study from the point of view of the producer and the user of graduates in economics, information was collected from two main sources: from the university as the producer of the required graduates; and from the government, the business community, and the same university as the user of the graduates it produces.

From the point of view of the university as a producer and user of graduates in economics, data were collected on the following: numbers of academic staff, their qualifications, areas of specialization, length of service and the existing salary structure; enrolment at the undergraduate and graduate levels; number of service courses, and enrolment in such courses; courses offered at the undergraduate and graduate levels, the sequence of such courses, and the corresponding number of contact hours; whether the graduate programme is by coursework alone, or by thesis alone, or both; library facilities at the departmental level as well as the university as a whole; the existence and regularity of staff/graduate student seminars; and the adequacy of the existing graduate programme in providing the academic staff required for teaching and research in the university.

These data were collected by interviewing deputy vice-chancellors (where this was possible), chairmen and academic staff of departments of economics, and directors and other staff of research institutes. Apart from these primary data collected by interviews, additional information was collected from secondary sources such as university calendars, course outlines, and staff terms of service.

From the point of view of the government and the business sector as users of

graduates in economics, the main areas of focus were the existing number of employees with graduate training in economics and places where training was obtained; current and future demand for economics graduates, and where such graduates are expected to come from (i.e. locally or abroad); the adequacy and relevance of the master's degrees obtained from local and foreign universities; training plans and any additional training conducted by these institutions to make good any inadequacy and lack of relevance of university training; the issue of attracting and retaining of economics graduates and any suggested measures for improving retention rates; and recent and on-going research projects. Most of this information was collected by interviewing senior civil servants in government and parastatals and company executives, including an assistant minister, permanent secretaries and managing directors of companies.

In collecting information on the major problems faced by these institutions with respect to the theme of this study, the consultant received information on problems confronted by institutions and suggestions for how best to solve them. This strategy enabled him to prepare a set of recommendations based on those respondents' suggestions.

IV. The economic environment

During the last decade and a half, the five countries covered in this study have experienced varying degrees of economic difficulty, including only slightly growing or falling per capita GNP, declining per capita food production leading to food shortages, high population growth rates, balance of payments problems, and heavy external debt. In all five countries, population growth rates have been high, and projections suggest that these high rates are likely to be maintained up to the year 2000. Table 1 provides data on population figures for 1986, and average annual growth rates for the period 1980–1987. The table also gives the corresponding projections for the period 1987–2000.

Table 1 Population of the region and average annual growth rates

Country	Population (millions)	Average annual growth rates (%)	
	1986	1980–1987	1987–2000
Ethiopia	43.5	2.4	3.1
Kenya	21.2	4.1	3.9
Tanzania	23.0	3.5	3.4
Zambia	6.9	3.6	3.5
Zimbabwe	8.7	3.7	3.0

Source: World Bank, *World Development Report*, 1988 and 1989.

The figures suggest that, although there is expected to be some decline in the average rate of population growth for the period, the decline will be marginal and in all five countries the projected average rates for the period 1987–2000 are over 3.0 percent per annum.

Looked at against the background of these high population growth rates, the performance of the respective economies has not been good. The average annual growth rates of per capita GNP have been either very low or, in some cases, negative. The same has been the case for the average annual growth rates of GDP, and the agricultural and industrial sectors.

Table 2 gives the relevant data. This table shows that two of the five countries

experienced negative GNP growth rates between 1965 and 1987. It can also be seen from the table that, although in most cases the average rate of growth of agriculture was positive during the period 1980–1987, if we take into account the population growth rates for the same period, we end up with negative per capita growth rates for the sector. The performance of food production was equally poor, as shown in Table 3. This table suggests that, due to the decline in domestic food production, as evidenced by the index of per capita food production, it became necessary to supplement domestic food production with food from outside the region in the form of cereals imports and aid. In some cases, the magnitude of this supplementary food aid was extremely large.

Table 2 GNP per capita and average annual growth rates of GNP per capita, GDP and agriculture

Country	Real GNP per capita ($)		Average annual growth (%)		
	Level 1987	Growth 1965 –1987	GDP 1980 –1987	Agricultural industry 1980 –1987	1980 –1987
Ethiopia	130	0.1	0.9	– 2.1	3.8
Kenya	330	1.9	3.8	3.4	3.0
Tanzania	180	– 0.4	1.7	3.8	– 2.4
Zambia	250	0.9	– 0.1	3.2	– 0.7
Zimbabwe	580	0.9	2.4	2.3	1.4

Source: World Bank, *World Development Report*, 1989.

Table 3 Food production, imports and aid

Country	Average index of food production per capita	Cereals imports ('000 metric tons)		Cereals-food aid ('000 metric tons)	
	1985–1987*	1974	1987	1974/75	1986/87
Ethiopia	1989	118	609	54	570
Kenya	1993	15	274	2	107
Tanzania	1990	431	118	148	55
Zambia	1997	93	150	5	116
Zimbabwe	1991	56	71	0	38

* 1979–1981=100

Source: World Bank, *World Development* Report, 1989.

With all these economic problems, expenditure on education by the central government is bound to be adversely affected, and consequently the quality of education in general, and that of universities in particular, is bound to suffer. Table 4 presents data on the percentage of total central government expenditure allocated to education.

Except for Kenya, the countries tabulated experienced declines in the percentage of total government expenditure allocated to education. The decline of these allocations, occurring concurrently with increasing costs of running educational institutions, has serious implications for the quality of education. Considering the fact that all educational inputs have experienced continuous increases in costs, educational institutions have had to do without a number of these inputs. The obvious consequence is an adverse effect on the quality of education.

Table 4 Percentage of total central government expenditure allocated to education

Country	1982	1983	1987
Ethiopia	11.1		10.7
Kenya		20.6	23.1
Tanzania		–	8.3
Zambia		15.6	8.3
Zimbabwe		21.5	20.3

Source: World Bank, *World Development Report*, 1986 and 1989. UNDP/World Bank, *African Economic and Financial Data 1989*.

V. The nature and adequacy of the graduate programmes

Apart from the University of Zambia, which has temporarily suspended its graduate teaching programme in economics, the other four universities (Addis Ababa, Dar es Salaam, Zimbabwe, and Nairobi) have on-going graduate programmes in economics. In all four universities the same academic staff teach at the undergraduate as well as the graduate levels. In addition, practically all the graduate students are drawn from their own undergraduate degree programmes. The two programmes are therefore so interlinked that any weakness in one of them will affect the other, directly or indirectly. For instance, if the undergraduate programme is academically weak, the students admitted into the corresponding graduate programme are bound to start their graduate studies from weak foundations.

A common and widespread problem is the rapid growth of student populations at the undergraduate level. With such large numbers of undergraduate students being taught by the same faculty, the amount of time that the faculty can afford to allocate to consultation, supervision, research, and seminars is bound to be adversely affected. If this situation is aggravated by poor infrastructure, then the implication for the quality of graduate programmes is serious.

Due to the mutual interdependence between the two programmes, this section of the study will focus on both the undergraduate and the graduate programmes offered in the five universities covered. This approach will enable us to see the effect that the undergraduate programmes have had on the corresponding post-graduate degree programmes.

Ethiopia

Ethiopia has three universities, namely, the University of Addis Ababa, Alemaya Agricultural University, and Asmara University. Of these three, the only one without a graduate degree programme is Asmara University. However, this study covered Addis Ababa University only.

The undergraduate programme

The undergraduate programme in economics at Addis Ababa University is a four-year one. The first year of the programme is general, and all candidates at that level are required to offer 30 compulsory 48-hour semester units during the year. The 30 units cover a wide spectrum of topics in social sciences with the main emphasis being on political economy. However, four of those units are closely related to economics, namely, political economy, development, quantitative methods, and economic geography. A summary of the undergraduate programme is given in Table 5.

Table 5 The undergraduate (BA) programme, Addis Ababa

Year	Total units	Main units	Contact hours per week	Contact hours per academic year
First	30			1,440
		1. Political economy		
		2. Economic geography		
		3. Quantitative methods		
Second	12			576
		1. Theory 1 and 2	3	96
		2. Maths	3	96
		3. Research methods	3	48
		4. Economic geography	3	48
		5. Accounting	3	96
		6. History of economic thought	3	96
Third	13			624
		1. Theory 1 and 2	3	96
		2. Statistics	3	48
		3. Econometrics	3	48
		4. Advanced political economics	3	48
		5. Scientific communism	3	48
		6. Development in the Third World	3	96
Fourth	10		480	
		1. Development planning	3	96
		2. Research paper	3	96
		3. Rural development	3	48
		4. Monetary and fiscal economics	3	96
		5. Economics of industry	3	48

Source: Department of Economics, University of Addis Ababa, Undergraduate Degree Programme, mimeo.

In the second year, the programme is fairly specific to the discipline of economics. Candidates are then required to offer a total of 12 compulsory 48-hour semester units. These units include economic theory, mathematics for economists, and introductory research methodology. The remaining units include English, accounting, history of economic thought, and the Ethiopian economy.

In the third year, candidates are required to offer a total of 13 compulsory 48-hour semester units which include 1 unit of economic theory, 2 units of statistics for economists, and 1 unit of introductory econometrics. The remaining courses cover, among other subjects, political economy of socialism and capitalism, and scientific communism.

The fourth and final year of the undergraduate programme consists of 10 compulsory 48-hour semester units. The main courses in this final year are development planning and project analysis and the BA project paper.

The graduate programme

The University of Addis Ababa offers a master's degree programme which is 2–4 years long. The focus of this programme is economic development and planning. The programme has a coursework and a thesis component. The coursework component occupies the whole of the first year and most of the second year. In order to fulfil the coursework requirements, candidates are expected to offer a total of 38 credit courses. These include credits in social theory and principles of planning, quantitative methods in planning, economic theory, econometrics, and comparative analysis of planning systems. Table 6 summarizes the MA programme.

Table 6 Summary of the postgraduate programme (MA), Addis Ababa

Year	Courses	Total credits	Contact hours per academic year
First	1. Theory	24	384
	2. Econometrics	3	48
	3. Quantitative methods in planning	6	96
	4. Socialist theory and planning	4	64
	5. Sectoral planning	3	48
	6. Project analysis	3	48
	7. Computer programming	2	32
Second		20	320
	1. Economic policy	3	48
	2. Regional development planning	3	48
	3. Planning enterprises	3	48
	4. Comparative planning systems	3	48
	5. Seminar on the Ethiopian economy	2	32
	6. Seminar on respective research topics	6	96

Source: Department ot Economics, Addis Ababa University, Postgraduate Programme, mimeo.

The thesis component of this programme requires the candidate to write a thesis that is considered to be original and a contribution to knowledge. There are three main stages in thesis preparation: proposal preparation and evaluation by a thesis proposal committee; data collection, analysis, and thesis writing; and finally, thesis examination.

The graduate programme is run on a part-time basis. Registered students are expected to spend half of the working day at the university and the other half at their place of work. Most of the students are government employees who continue to earn their salaries, and their fees at the university are paid by the government. According to respondents interviewed, about 50 per cent of the students complete the programme in about four years. Some take longer than that and some drop out completely.

Adequacy and relevance

Because of the timing of the consultant's visit to Addis Ababa, which coincided with the OAU meeting and the proximity of budget day, he was not able to meet as many executives as previously planned. He did, however, interview senior personnel and executives in the Ministry of Finance, the Ethiopian National Bank, and the Ethiopian Management Institute. The general feeling of these executives was:

1. That the programme was too restrictive, and did not cover many areas which would have been relevant to specific sectors in the economy;
2. That due to this restrictive nature of the programme, departments whose specializations are not catered for are forced to sponsor their candidates to study outside the country;
3. Some of the shortcomings of the local postgraduate programme that were specifically mentioned by respondents were:
   (a) A weak quantitative background which reduced the ability of the graduates in the areas of policy research and management
   (b) A complete lack of important courses such as monetary economics, public finance, and international economics;
4. The number of postgraduates produced was inadequate and even the ministries and departments which might have benefited from the output of the programme are forced to train their candidates abroad;
5. Students take too long to complete their programmes.

Kenya

Kenya has a total of four universities, but only two of these offer graduate programmes in economics, namely, the University of Nairobi, and Kenyatta University. This study covered the University of Nairobi.

The undergraduate programme

The University of Nairobi has a three-year undergraduate programme in economics. During the three-year period, the candidate is expected to cover a total of 10 economics courses (20 units) and 4 non-economics courses (8 units) chosen by the candidate on the basis of his personal preference. During the first year of the programme, all the students in the Faculty of Arts (economics and non-economics) are required to offer 12 units, 4 from each of three subjects chosen by the student on the basis of his personal preference. Thereafter, the economics student is expected to cover 6 compulsory units and 2 optional units in the second year, and 2 compulsory and 6 optional units in the third year. Details of the programme are provided in Table 7.

Table 7 The undergraduate programme, Nairobi

Year	Units	Contact hours per week	Contact hours per academic year
First			600
	1. Microeconomics	4	60
	2. Macroeconomics	4	60
	3. Mathematics for economics	4	60
	4. African economics problems	4	60
	5. Four units from a second subject	16	180
	6. Four units from a third subject	16	180
Second			360
	1. Intermediate microeconomics	3	45
	2. Intermediate macroeconomics	3	45
	3. Economic statistics I	3	45
	4. Economic statistics II	3	45
	5. Mathematics for economics I	3	45
	6. Mathematics for economics II	3	45
	7. Optional units	6	90
Third			360
	1. Economic development I	3	45
	2. Economic development II	3	45
	3. Six optional units	18	270
Total number of contact hours			1,320

A student who intends to register in economics is required to have passed with a minimum of credit 6 in mathematics in the Form IV Kenya Certificate of Secondary Education examinations. Once this student has satisfied the minimum Faculty of Arts entry requirements, he is registered in the Department of Economics. Specialization starts in the second year of the BA programme. In

order to be admitted into the specializing stream, the candidate is required to have attained the minimum of an upper-second-class score in his first-year BA examinations.

As is clear from the table, most of the optional courses are offered in the third year of the programme. The main reason for this is that, by that time, the student will have established a strong foundation in economic theory and quantitative economics on which to build his chosen options. Table 8 lists the optional courses available.

Table 8 Optional units at undergraduate level, Nairobi

	Second year	Third year
1.	Economic demography I & II	1. Public finance I & II
2.	Accounting and control I & II	2. Money, banking and finance I & II
3.	Comparative economic systems I & II	3. International trade I & II
4.	Economic history I & II	4. Labour and industry I & II
		5. Advanced economic statistics I & II
		6. Quantitative methods I & II
		7. History of economic thought I & II
		8. Advanced economic theory I & II

The system of education in Kenya has, however, been in the process of transition from a 7-6-3 to an 8-4-4 structure over the last ten years. This means that the duration of primary education will now be eight years, that of secondary education four years, and university four years. This transition has been accompanied by a complete overhaul of the old syllabus from the primary level through to the secondary and university levels. Under the new system, secondary-school students are registered for ten compulsory subjects, among them being business education which has a substantial economics component. Business education is a subject from the first year of secondary school, and if properly taught this may mean that 8-4-4 students will have a greater exposure to economics by the time they reach university than the former 7-6-3 students. The change to the 8-4-4 system also has necessitated a change in the university syllabus to conform with that at the secondary-school level.

One additional development relates to enrolment at university level. The four public universities had one double intake three years ago. The next double intake will be in the academic year 1990/91, when it will be made up of one 7-6-3 stream and one 8-4-4 stream. Thereafter, because of high demand, the university system is likely to continue with two streams.

The graduate programme

The University of Nairobi offers BPhil, MA, and PhD courses in economics at the postgraduate level. The BPhil programme involves coursework alone, the

MA involves coursework and a thesis, and the PhD programme is either by coursework and thesis, or by thesis alone, the former falling under the so-called sandwich programme (see "Staff development programmes in Dar es Salaam and Nairobi", Section VI).

The BPhil degree is a one-year course which was originally intended to provide a second degree in economics for civil servants who are planning to join the government scheme of service. Today, demand for it has spread to many other sectors of the economy, with the civil service still having the largest share of candidates in the programme.

Candidates registered for the BPhil are required to take a total of 8 units during the academic year. These units are the same as those taken by MA I students, except for economic theory and econometrics which are taken by a small number of BPhil students whose backgrounds are considered strong. For the rest of the BPhil students, applied statistics (half of which is elementary econometrics) replaces econometrics, and economic analysis (less sophisticated theory) replaces economic theory. Table 9 gives details of the programme.

Table 9 The MA programme, Nairobi

Year	Units	Contact hours per week	Contact hours per academic year
First	Eight units in total	4	80
	1. Macroeconomics	4	60
	Microeconomics	4	60
	2. Econometrics I	4	60
	Econometrics II	4	60
	3. Economic policy analysis	4	60
	4. Development strategies	4	60
	5. Project evaluation	4	60
	6. Planning techniques	4	60
Second			240
	1. Four options chosen from:	16	240
	(i) Monetary theory		
	(ii) Public finance		
	(iii) International trade		
	(iv) Labour and manpower		
	(v) Agricultural production analysis		
	(vi) Agricultural policy analysis		
	(vii) Advanced microeconomics		
	(viii) Advanced macroeconomics		

The MA degree programme in economics lasts for two years. During the two-year period, the candidate is required to fulfil both coursework and thesis requirements. The coursework component of the programme involves a written

examination in 12 course units, eight of which are covered in the first year and four in the second year. All the optional courses in this programme are offered in the second year. During the first year, there is, in addition, a compulsory non-credit course in research methodology, computing and report writing.

With the help of two supervisors, the candidate is required to prepare his thesis proposal during the long vacation following the end of the first year. This proposal is then defended at the weekly postgraduate seminars in the Department which are attended by all academic staff and graduate students. Thereafter, the two supervisors take the responsibility of guiding the student through his thesis, which is expected to be complete by the end of the second academic year.

Candidates registered for a PhD have five years during which to complete the programme. They are permitted to apply for an extension of their registration for a further year provided that there is a good reason for doing so.

Candidates who are registered for PhD by thesis alone are assigned three supervisors, but only after they have submitted proposals which have been accepted by the Department of Economics and the Faculty of Arts Postgraduate Studies Committee. Once a candidate has collected the required data, analysed such data, and written his thesis to the satisfaction of his supervisors and the Department, an external examiner and two internal examiners are appointed to examine the thesis before the candidate is finally called upon to defend it. On successful defence, the candidate is awarded a degree of the University of Nairobi.

The two lecturers who did their PhDs on the sandwich programme were registered at the University of Nairobi but covered their coursework in different foreign universities. Once they had completed their coursework, they came back to Nairobi University where they completed their thesis and graduated with PhDs from the University of Nairobi. Table 10 summarizes details of the PhD programme.

Table 10 The PhD programme, Nairobi

Candidate's objective	Nature of PhD programme	Pre-requisite	Duration of programme
1. Join teaching staff at University	1. Sandwich programme	1. MA in economics from University of Nairobi or any other recognized university	1. Six years; extension for one year if there is good cause
	2. PhD by thesis alone	2. Candidate must be member of Departmental Staff Development Programme	
2. No desire to join teaching staff	1. PhD by thesis alone	1. MA in economics from University of Nairobi or any other recognized university	1. Same as above

Source: Department of Economics, University of Nairobi.

Adequacy and relevance

Towards the end of the 1960s, due to increased demand in the civil service for graduates with a second degree in economics, the University of Nairobi, with the assistance of the Rockefeller Foundation, started the BPhil programme. A few years later, the MA programme was started. Although the Kenya Government still sends some of its economists to study for MA degrees in various other parts of the world, practically all the BPhil and many MA graduates from the Department join the civil service on completion of their degree programmes.

Discussions with various executives in the civil service and parastatals, and relevant academics in the other three national universities, suggest that:

1. The civil service is satisfied with the quality and relevance of the BPhil and MA degrees offered at the University;
2. The parastatals and company executives interviewed are also satisfied with the competence of these graduates in economics, but they say that it has always been necessary to provide them with further training in management and administrative skills;
3. The other three national universities have also expressed satisfaction with the MA graduates who have been employed in substantive positions, and those on staff development programmes;
4. Comparing the two PhD programmes offered at the University, it is felt that the sandwich programme is better. Some of the reasons for this are:
   (a) The sandwich programme has a coursework component which provides the candidate with the opportunity to cover additional courses before starting his thesis. The PhD by thesis alone does not offer this opportunity
   (b) The additional coursework beyond the MA enables sandwich PhD graduates to teach several courses at the postgraduate level
   (c) The sandwich programme allows for cross-fertilization in training. PhD by thesis alone encourages in-breeding.

Tanzania

At the University of Dar es Salaam, the undergraduate programme is three years long. The courses offered can be categorized under three main headings: theory, quantitative, and applied.

The undergraduate programme

Students intending to specialize in economics at the University of Dar es Salaam are required to cover a total of 19 courses in addition to writing a small research

paper in the final year of their BA programme. Details of the courses and contact hours are given in Table 11.

Table 11 The undergraduate programme (BA), Dar es Salaam

Year	Total courses	Course names	Contact hours per week	Hours of contact per academic year
First	7		5	46
		1. Microeconomics	3	78
		2. Macroeconomics	3	78
		3. Statistics	3	78
		4. Mathematics	3	78
		5. Accounting	3	78
		6. Research methodology	3	78
		7. One option	3	78
Second	6		4	68
		1. Economic theory	3	78
		2. Quantitative methods	3	78
		3. Development planning	3	78
		4. Agricultural economics and rural development	3	78
		5. Industrial economics	3	78
		6. Development studies (political economy, emphasis on sociology)	3	78
Third	6			
		1. Planning sub-stream *or*		468
		2. Industrial sub-stream *or*		486
		3. Agricultural sub-stream *plus*		468
		4. Small research paper		

Source: Economics Department, University of Dar es Salaam.

In the first year, students are required to cover 6 compulsory and 1 optional course. In the second year, a total of 6 courses are covered, all of which are compulsory. In the third year, students are divided into three sub-streams, namely, planning, industrial, and agriculture. Although they are usually advised on which sub-stream would be most appropriate and suitable on the basis of their performance and aptitude, the final decision is left to each individual student.

The graduate programme

Dar es Salaam University offers both an MA and a PhD in economics within its graduate programme. The MA programme, which is offered by coursework and thesis, has a duration of 18–24 months. During the first year of this programme, candidates are required to take 7 courses, 5 of which are compulsory. In the second year, all candidates take one course in research methodology and, thereafter, devote the rest of the time to their theses. Details of the programme are given in Table 12.

Table 12 The MA programme, Dar es Salaam

Year	Total courses	Names of courses	Hours of contact per week	Hours of contact per academic year
First	7		546	
		1. Macroeconomics	3	78
		2. Microeconomics	3	78
		3. Mathematical economics	3	78
		4. Statistics	3	78
		5. Economic development and planning	3	78
		and		
		6. Two options	6	156
Second		1. Research methodology		78
		2. Thesis		

Source: Economics Department, University of Dar es Salaam.

The PhDs offered by the University are of two different types, depending upon whether or not the candidate in question intends to join the teaching staff in the University. Candidates intending to become faculty members in the University are required to take coursework as well as a thesis. These candidates follow the sandwich programme in which they are offered competitive scholarships to go to a recognized university outside the country to conduct a full PhD coursework programme. Having satisfied the coursework requirements, the candidate then proceeds to the thesis stage.

For candidates who have no intention of joining the teaching staff at the University, no coursework is required. For these candidates, all that is required is a satisfactory thesis before the PhD degree is awarded. Table 13 summarizes details of the two PhD programmes.

Table 13 The PhD programme, Dar es Salaam

Candidates' objectives	Nature of PhD programme	Prerequisite	Duration of programme
	Sandwich		
1. Join teaching staff at University	1. Must satisfy full coursework requirement in a recognized university	1. MA in economics from University of Dar es Salaam or any other recognized university	1. Maximum of 6 years
	2. Must write and defend thesis		
	3. Supervisors chosen from home university and university at which course-work was offered	2. Candidate must be in the Departmental Staff Development Programme	
	4. Degree awarded at home university		
2. No desire to join teaching staff	1. No coursework required	1. MA in economics from University of Dar es Salaam or any other recognized university	1. Maximum of 6 years
	2. Must write and defend thesis		
	3. Degree awarded at Dar es Salaam University		

Source: Department of Economics, Dar es Salaam University.

Adequacy and relevance

On the basis of discussions with University academic staff and senior policy makers in Government, the following conclusions were drawn:

1. Government ministries are satisfied with the quality and relevance of the MA graduates from the university.
2. In particular, it should be noted that the specializations offered by the three sub-streams in the MA programme are consistent with demands in Government ministries and the various corporations.
3. The theory and analytical skills covered by these graduates is satisfactory. For this reason, on-the-job training is greatly facilitated. Graduates from the University have demonstrated a high degree of flexibility and the capability of mastering a variety of tasks without difficulty.
4. As far as the PhDs based on the sandwich programme are concerned, the University is satisfied that the coverage, rigour, relevance, and quality are all adequate. Moreover, under the sandwich arrangement, a team of two top economists (headed by the Chairman, Department of Economics and the Director of the Economic Research Bureau) carry out a detailed annual evaluation of the coursework as well as the thesis components of the programme. Thereafter, they prepare a comprehensive report which is available to the donors as well as in the home country.

Zambia

Zambia has two universities: the University of Zambia, and Copperbelt University. Copperbelt University has no graduate degree programme in economics. The University of Zambia has a master's programme in economics, although it has been temporarily suspended due to budgetary problems. Nevertheless, we will give details of the programme in this report so as to be able to evaluate the shortfall in teaching capacity.

The undergraduate programme

The undergraduate programme in the University of Zambia is three years in duration. During the three years, candidates majoring in economics are required to cover a total of 16 courses chosen from the Departments of Mathematics and Economics. In the first two years, students majoring in economics register for courses in economics and mathematics. In the third year, in order to acquire the degree of specialization required, these candidates register for economics courses alone. Table 14 provides a summary of the undergraduate programme.

Table 14 The undergraduate programme, Zambia

Year	Total no. of courses	Courses	Contact hours per week per course	Contact hours per academic year
First		From economics and mathematics	4	96
Second		From economics and mathematics	4	96
Third		From economics	4	96
Total	16			

The graduate programme

Students registered for a master's degree in economics are allowed a maximum of three years in which to complete the programme. The first year of this period is devoted to coursework, and the remaining two years to the thesis.

Adequacy and relevance

Executives interviewed in various departments in government and the business sector spoke of a high demand for graduates with master's degrees in economics. However, since the local university has not been able to satisfy the demand, these departments have arrangements for sponsoring their employees to study overseas, mostly in Britain and the USA. Information collected from the

government departments and business sectors visited suggests that the majority of graduates employed in these government departments and business sectors obtained their degrees outside the country.

It was the general feeling of these respondents that graduates from Britain and the USA were well trained and had a good grasp of theory and quantitative economics. However, their greatest weakness is lack of adequate exposure to economics of the developing world in general, and problems of their home economies in particular. In all cases, these graduates are provided with in-service training lasting up to two years. The nature of this training depends upon the functions of the government department under consideration. However, the executives interviewed repeatedly observed that graduates with an interest and motivation in their jobs, and who had had a sound training in economic theory, quantitative economics, and research methodology, seldom have any difficulty mastering the various assignments required of them in their employment.

Zimbabwe

Zimbabwe has only one university, namely, the University of Zimbabwe. The Department of Economics of the University has an on-going graduate degree programme.

The undergraduate programme

The undergraduate programme in economics is three years in duration. In the first year, candidates offer a total of 5 courses: 3 of these are compulsory 96-hour courses in economics, and the remaining 2 are selected by the student from two other departments. The compulsory courses are made up of principles of economics, introductory statistics, and mathematics and computing.

In the second year, candidates are expected to offer 3 compulsory courses and 3 optional courses in economics. The 3 compulsory courses offered in the second year are microeconomic theory, political economy and international trade and development theory. In the third year, candidates are required to offer 1 compulsory course (macroeconomic theory) and at least 3 optional courses in economics. Table 15 gives details of the undergraduate degree programme in economics at the university, and Table 16 provides details of the available optional courses.

Table 15 The undergraduate programme, Zimbabwe

Year	Total courses	Course name	Contact hours per week	Contact hours per academic year
First	5			480
		1. Principles of economics	4	96
		• Microeconomics		
		• Macroeconomics		
		• Development		
		2. Introduction to economic statistics	4	96
		3. Mathematics and computing	4	96
		4. 2 optional courses—other departments	8	192
Second	6			432
		1. Microeconomics	3	72
		2. Political economy	3	72
		3. International trade and development	3	72
		4. Three optional courses	9	216
Third	7			504
		1. Macroeconomics	3	72
		2. Six optional courses	18	432

Source: Department of Economics files, University of Zimbabwe.

Table 16 Optional courses in economics, Zimbabwe

Second year	Third year
1. History of economic thought	1. Same
2. Quantitative methods	2. Same
3. Statistical analysis and applications	3. Same
4. Monetary economics	4. Public finance
	5. Labour economics
	6. Econometrics
	7. Industrial economics
	8. Economic planning

Source: Department of Economics files, University of Zimbabwe.

The graduate programme

The MA programme at the University of Zimbabwe has a minimum duration of 18 months. The 18-month period is divided into 10 months of coursework and 8 months of thesis.

For his or her coursework, a student is expected to offer 3 compulsory courses, and 1 optional course. Table 17 provides details of the programme.

Table 17 The graduate programme, Zimbabwe

	Course name	Contact hours per week	Contact hours per academic year
1.	Advanced economic theory consists of: (a) Advanced Marxian economics (b) Advanced macroeconomics (c) Advanced microeconomics	3	72
2.	Political economy of development	3	72
3.	Applied research methods or econometrics	3	72
4.	One optional course from a list including: (a) International trade (b) Monetary economics (c) Public finance (d) Economic planning	3	72
Total contact hours			288

Source: Department of Economics files, University of Zimbabwe.

Students registered for this course only study part time as they are simultaneously fully employed by the Government. Therefore, lectures are run in the evenings when such students are available. An additional problem relates to the financing of the programme. Normally, the parent ministries have no scholarship or sponsorship programmes, and so the majority of candidates have to pay fees themselves.

Although the programme is designed to cover 18 months, information provided by respondents suggests that hardly any candidates have been able to complete the programme in that time due to excessive delays at the thesis stage. Although the coursework stage also has its problems, these are relatively minor compared to the supervision problems they face at the thesis stage. In many cases this stage lasts for such a long time that in the end candidates become discouraged and simply drop out.

Some of the other problems that this programme has run in to are the following:

1. Frequent absenteeism of students owing to assignment of tasks by parent ministries during the programme;
2. Absence of scholarship/sponsorship programme which might have acted as an incentive;

3. Lack of a system in the various departments for releasing their employees to undertake the master's programme on a full-time basis;
4. Lack of commitment/interest on the part of the employer departments to either fund the programme or release the candidates, or both;
5. Inadequate teaching staff.

Adequacy and relevance

Some respondents from the university, Government and the business community feel that there is a great deal of room for improving both the undergraduate and graduate programmes in the University of Zimbabwe. The first area relates to the content of both the undergraduate as well as the graduate programmes. At the undergraduate level, these respondents feel that very little time is devoted to quantitative economics such as economic statistics, mathematics for economists, and econometrics. The second group of suggestions relates to sequencing of courses. Here, it was felt that a course such as macroeconomics would have been better placed in the second year since a large proportion of its content is important for the optional courses offered in both the second and third years.

At the graduate level, it was felt that econometrics should be made compulsory, that more time should be allocated to the teaching of economic theory, and that candidates should be allowed to offer two options rather than one. Because of an apparent weakness in quantitative economics at the undergraduate level, it was argued that students tended to avoid the quantitative courses, such as econometrics, at the graduate level. As a result, they face a great deal of difficulty at the thesis stage when they are expected to use quantitative methods to formulate hypotheses, build models, collect required data, analyse such data, and draw inferences. This, it was felt, was the most probable reason for candidates spending a long time doing their theses and in the end dropping out of the programme without completing them.

VI. Teaching capacity and staff development programmes

One of the most important inputs into graduate training is the quality and numbers of teaching staff. In all five universities the undergraduate and graduate programmes are taught by the same academic staff. With the rapid increase in undergraduate populations, the teaching load has also increased substantially, as a result of which research, supervision and teaching have been adversely affected. This increase in student populations has not been so great at the University of Dar es Salaam, but at the University of Nairobi the scarcity of teaching staff is likely to get more and more severe as the other three national universities develop economics programmes which will compete for the same pool of academic staff.

Enrolments at the undergraduate and graduate levels

In all the universities covered, with the exception of Addis Ababa, teaching staff in the departments of economics also participate in the teaching of service courses in other departments. Since those students who have been registered in economics service courses are not full-time economics students, their numbers must be adjusted so as to determine the corresponding full-time student equivalent (FTSE). Table 18 provides data on numbers of students registered in economics departments and economics service courses in other departments at the five universities.

Table 18 Undergraduate and graduate enrolments

University	Economics Department			Service courses
	BA	MA	PhD	BA
Addis Ababa[1]	300	n.a.	n.a.	n.a.
Nairobi	1,000	48	3	1,000
Dar es Salaam	350	10	2	330
Zambia	220			200
Zimbabwe	150	12		400

1. Details for MA, PhD and service courses were not available.

The FTSE is calculated from the numbers of students registered in the service courses by weighting these numbers by the ratio of contact hours for economics relative to the total number of contact hours for the students in question for a particular time period. Due to the intensity of the master's and doctorate studies, the numbers of MA and PhD students have also been adjusted to arrive at the corresponding FTSEs given in Table 19.

Table 19 Full-time student equivalents

University	BA	MA	PhD	Service	FTSE
Addis Ababa[1]	300	n.a.	n.a.	n.a.	300
Nairobi	700	96	12	250	1,058
Dar es Salaam	350	20	8	110	488
Zambia	220	50			270
Zimbabwe	150	24		100	274

1. Details for MA, PhD and service courses were not available.

The table shows, for instance, that the University of Zimbabwe economics staff teach a total of 274 full-time students, in Nairobi 1,058, and in Dar es Salaam 488.

Teaching staff, qualifications and where trained

Teaching staff are a mixture of nationals and foreigners. The countries where they received their training are also diverse, though the USA and the UK clearly come out as the principal training ground for nationals. Table 20 gives details of the numbers of the teaching staff, their training, and whether they are nationals or foreigners.

Nairobi University seems to have difficulty filling vacant positions on its establishment. This has been due to a number of factors, including a lack of nationals who have the required qualifications; loss of local faculty to other institutions; and terms of service not adequately attractive to foreign scholars. In the 1960s, when various donor agencies provided a topping-up and inducement allowance to such teaching staff, attracting scholars from the USA and UK was not a problem. A significant reduction in the present teaching load could be affected by employing more foreign teaching staff to fill the vacant positions.

Table 20 Particulars of teaching staff

University	Establish-ment	Total staff	Qualifications PhD	MA	BA	Where degree obtained	Nationality
Addis Ababa	19	19	7	6	6	USA (3) France (1) Hungary (1) Czech. (2) UK (2) Addis (10)	Foreign = 4 Local = 5
Dar es Salaam	28	28	17	11	0	USA Sandwich (Scandinavia, UK)	Local = 15 PhD Local = 11 MA Foreign = 2 PhD
Nairobi	31	27	17	10	0	USA (6) USSR (3) India (3) UK (1) Canada (1) France (1) Nairobi (12)	Local = 11 PhD Foreign = 6 PhD Local = 10 MA
Zambia	15	8	3	5	0	USA (3) UK (4) India (1)	Local = 6 Foreign = 2
Zimbabwe	17	11	3	8	0	USA UK	Local = 2 PhD Foreign = 1 PhD Local = 8 MA

Teaching load: Student-teacher ratio

In order to determine the teaching load at each of the universities, student-teacher ratios have been calculated on the basis of the FTSE provided in Table 19. Although these estimates are rough ones, they provide some indication of the excessive teaching load shouldered by economics teaching staff in the region.

The student-teacher ratio recommended by UNESCO for arts and social sciences is 12. None of these universities is operating any where close to that recommended figure. Even if all the vacant positions in their establishments were to be filled, the universities would still be seriously understaffed. This situation is likely to get worse as the undergraduate population multiplies. The effects on the quality of both the undergraduate and graduate degree programmes cannot be overemphasized. The ratios are given in Table 21.

Table 21 Teaching load: Student-teacher ratio

University	FTSE	Total teaching staff		Student-teacher ratio	
		Actual staff	Establishment	Actual staff	Establishment
Addis Ababa	300	18		17	
Nairobi	1,058	31	36	34	29
Dar es Salaam	488	28	28	17	17
Zambia	270	8	15	34	18
Zimbabwe	274	11	17	25	16

Staff development programmes in Dar es Salaam and Nairobi

These staff development programmes go back to the 1960s when the majority of teaching staff in the two departments of economics were foreign. At that time, it was felt that the only way to localize the teaching staff was to provide full PhD scholarships to promising locals who would then go abroad and carry out their studies in different foreign universities. The Rockefeller Foundation, the Ford Foundation and the Commonwealth Scholarship Programme were among the most active agencies in the provision of these scholarships.

Towards the end of the 1970s, fully funded scholarships petered out. At the same time, the number of teaching staff at Dar es Salaam and Nairobi with good PhDs had grown to a level where it was possible to mount a PhD programme by thesis.

In the case of Dar es Salaam, by 1981 discussions had started with the University of Lund about the so-called sandwich programme. These sandwich programmes involve the participation of two universities: a foreign one and the home university. Having satisfied the minimum entry requirements for PhD for the foreign university, the candidate is registered in that university and is expected to cover his coursework requirements before moving to the thesis stage. Once his coursework is complete, he is allocated supervisors from home as well as the foreign university. Thereafter, he is expected to complete the preliminary proposal preparation at the foreign university, before proceeding home where he will complete the proposal, collect required date, and perform preliminary analysis of them. Although the final data analysis and writing of the thesis is done in the foreign university, defence is done at the home university where the candidate is awarded his degree.

Simultaneously, Dar es Salaam had started preparing the syllabus for mounting a PhD programme by coursework and thesis. Up to that time, the teaching staff devoted their time exclusively to teaching and research, therefore the work load involved in mounting such a programme would have been manageable.

By about 1984, however, Dar es Salaam began having second thoughts about the PhD by coursework and thesis. The volume of consultancies undertaken by

the teaching staff had reached a level that would have had an adverse effect on such a demanding PhD programme. Members of the academic staff were constantly called upon by ministries and corporations to give their expert advice on various issues of national importance, and to participate in projects, the preparation of various policy documents, and various negotiations involving the IMF, the World Bank and other international agencies. However, by this time the negotiations with Lund on the sandwich programme had been concluded and the first batch of two scholars had been registered at Lund by 1981/82.

So far, only one candidate from Dar es Salaam has graduated with a PhD under this programme. There are a total of five candidates who have finished the coursework stage, but have yet to complete their theses. In almost all these cases, the thesis stage has been extremely slow, mainly owing to distractions from consultancies which are lucrative and time consuming. The University of Nairobi is trying to overcome this problem by sending the candidates back to the overseas university to write and complete their theses as soon as they complete their data collection.

The current sandwich programme at the University of Nairobi is a modified one in which the foreign university participates in the training programme at both the coursework and the thesis stages. The earlier sandwich programme in Nairobi only involved foreign participation at the coursework stage. The thesis was wholly local. The "modified" sandwich programme is the same as that followed at Dar es Salaam. The coursework is covered at the foreign university, where the proposal is developed and approved. Thereafter, the candidate is assigned supervisors from the home and foreign universities. Data necessary for the thesis are collected at home, where part of the thesis writing and orals take place. The successful candidate is finally awarded a PhD degree from his or her home university.

Two members of staff in the Department of Economics, University of Nairobi, have been trained under a sandwich programme. One of them, now a Senior Lecturer, covered his coursework at Yale University. The other, who covered his coursework at the University of Surrey in the UK, was due to graduate in November 1989. The third PhD candidate, under the modified sandwich programme, is now registered at the University of Gothenburg.

The two cases of sandwich PhDs in Nairobi have the advantage of additional exposure which is not available in the local PhD by thesis. In addition, the sandwich PhDs were completed in a shorter period than the local PhD by thesis.

VII. The teaching and learning environment

In addition to a good set of teaching staff, university training requires a good teaching and learning environment. The expression "teaching and learning environment" has been used to include the following inputs: infrastructure; intellectual interaction measured in terms of staff and student seminars, research, and public debates; and the general respect and recognition accorded to the scholar by way of providing him with the opportunity to participate in national policy formulation and the decision-making process.

Infrastructure

Information was collected on three main areas: books, journals, and computing facilities. In all the universities visited, the general supply of these three inputs was found to be very poor. The supply of books was poor in terms of coverage, numbers, and topicality. In some libraries, the books were very old and new ones had not been bought for years. The same was found to be true for journals which were infrequently supplied. As regards computing facilities, they were so inadequate that crowding or queuing to gain access to them was the order of the day.

In situations where the economics departments had close working relations with active research institutes, the general infrastructural situation was found to be better. A good example is Addis Ababa University where collaboration and close association with the active Institute of Development Research (IDR) has substantially benefited the sister economics department. The IDR has succeeded in developing a commendable documentation centre with many relevant and up-to-date publications, as well as setting up a computing division equipped with several microcomputers. Owing to the dynamic leadership of the IDR, it has also managed to obtain substantial research funds, with the result that it has a busy programme of research being conducted by its staff and other interested scholars.

The Department of Economics in the University of Nairobi has a computer

division with six microcomputers for graduate students and staff, one being reserved for production of the *Eastern Africa Economic Review* journal. It was felt, however, that more computers were needed, both for word processing and professional use. There is a Departmental graduate library which has virtually fallen into disuse due to lack of funds to supply books and journals. The Department has also been unable to employ a clerk to look after the library. For many years the Department benefited from access to the library of the Institute for Development Studies, but for some time now the Institute's acquisitions have not been kept up to date.

In Dar es Salaam, the close working relationship between the Department of Economics and the Economic Research Bureau has benefited both bodies and the country in general. The two departments have negotiated together to secure funds for equipment, computing facilities, and research projects. They have also conducted collaborative research projects and jointly participated in providing the Government's decision-making machinery with expert advice. The Department of Economics at Dar es Salaam has five microcomputers.

At the University of Zimbabwe, there is a unit similar to Ethiopia's Institute of Development Research, but it is still in its infancy and mainly intended for scholars and policy makers in education. This unit, known as the Human Resource Research Centre, has good but limited computing facilities. The Centre provides training in the use of the computers which are then made available to educationists for their research. The unit is growing steadily and is currently in the process of forging a formal relationship with the Department of Economics.

Infrastructure is also improved where a department has managed to independently secure its computing facilities. The University of Zimbabwe is one such example. The Department of Economics in that university has managed to secure a total of ten microcomputers for its staff and graduate students. Table 22 is a summary of the infrastructure situation in the universities.

Table 22 General infrastructure situation

University	Library	Computing facilities	Research institute
Addis Ababa	*I. University level*	*I. University level*	*I. IDR*
	1. Present	1. Present	1. Active
	2. Books • poor coverage • too few • many old	2. Limited facilities 3. Crowding and queuing	2. Good documentation centre
	3. Journals • poor coverage • infrequent supply • many old	*II. Departmental level* 1. Not present	3. Over 15 microcomputers

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Nairobi	*I. University level* 1. Present 2. Books • poor coverage • too few • mostly old 3. Journals • poor coverage • infrequent supply • mostly too old *II. Departmental level* 1. Present 2. Falling into disuse	*I. University level* 1. Present 2. Rather limited 3. Some crowding *II. Departmental level* 1. Present 2. Five microcomputers 3. Supply limited for 76	*I. IDS* 1. Limited • books • journals 2. No computing facilities
Zambia	*I. University level* 1. Present 2. Books • poor coverage • too few • many old 3. Journals • poor coverage • infrequent supply • many too old *II. Departmental level* 1. Not present	*I. University level* 1. Present 2. Limited facilities 3. Crowding and queuing *II. Departmental level* 1. Not present	
Zimbabwe	*I. University level* 1. Present 2. Books • poor coverage • mostly old 3. Journals • poor coverage • infrequent supply • Mostly too old *II. Departmental level* 1. Not present	*I. University level* 1. Present 2. Limited facilities 3. Crowding and queuing *II. Departmental level* 1. Present 2. 10 microcomputers for staff and students	*I. HRRC* 1. New, small 2. Steady development 3. Trains and provides computer facilities

Intellectual interaction

Seminars, research, and public debates are important parts of intellectual development. These activities are carried out with varying intensity in the universities covered.

In the University of Addis Ababa, the Department of Economics does not run its own independent seminars. Through its close association with the IDR, its members, a good number of whom are seconded to IDR, participate in joint IDR/university seminars which are regular, well organized, and mostly based on academic research.

The University of Nairobi Economics Department has weekly graduate seminars which are based on graduate student thesis proposals and are attended by staff and postgraduate students. Staff presentations are normally made at the Kenya Economic Association's (KEA) regular monthly meetings. Most of the leaders of the Association are members of staff in the Department, and all the staff in the Department are members of the Association. Its meetings are well attended, and presentations are written up and later published as monographs.

The Association has also attracted senior policy makers in government and executives from the business community. The academic staff from the Department of Economics, Nairobi, were called upon to provide expert advice on various subjects of national importance. However, this does not happen as often as it does in Tanzania. Between 1983 and 1987, the Kenya Economics Association (KEA) played a great part in bringing academics and policy makers together through the monthly seminars and research activities it organized. These ties were substantially broken when the KEA stopped its popular activities in 1987 when funding from the Ebert Foundation ceased. Now AERC has provided funds for a period of one year, and it is expected that these activities will start up again.

For some time, the most active organ for informal discussions, seminars and public debates on economic issues in Tanzania has been the alliance between the Department of Economics and the Economic Research Bureau of the University of Dar es Salaam. The relationship between this alliance and the decision-making machinery in Government is so close that for practical purposes one can say that the alliance is part and parcel of that machinery. Among the activities it undertakes are:

1. Organization of regular seminars (once every six weeks) based on the findings of research projects and consultancies;
2. Preliminary discussions with senior members of a decision-making group on proposals intended for inclusion in government policy documents;
3. Involvement in the preparation of Cabinet papers;
4. Annual economic policy seminars and workshops focusing on:
   (a) Long-term policy issues
   (b) Critical appraisal of annual policy documents such as budgets.

Although these activities clearly indicate that the alliance has been intimately involved in shaping the Tanzanian economy, in addition to playing the role of catalyst in discussions on issues of national importance, it is felt in some Government circles that the discussions do not approach the intensity and intellectual level of earlier seminars organized by the Economic Research Bureau. Those seminars were regular, and widely attended by university academics and decision makers from Government and corporations. In addition, they generated much lively debate, some of which was carried to various ministries and all regions of the country.

Nor could the current seminars be compared to the debates that surrounded the structural adjustment programme (SAP) period. The SAP debates were protracted, sometimes emotional, but apparently organized to facilitate the gauging of public opinion by parliamentarians before debates on various aspects of the programme came to Parliament. During that period, cabinet ministers, top civil servants and the alliance worked intimately to gauge as well as influence public opinion and attitudes towards SAP.

In the University of Zambia, departmental seminars are not regular, but they are often organized on an *ad hoc* basis. The only regular seminars are graduate student seminars organized to discuss thesis proposals. A related activity is the preparation of occasional papers based on major government policy documents such as the budget and the five-year development plan.

Public debates on economic issues in Zambia are regular and well attended. The Zambia Economic Society, funded by the Ebert Foundation, holds discussion seminars once every month on economic issues of national importance. The meetings draw together senior policy makers in government, business executives, and university intellectuals. Although some of these discussions have focused on issues of strategic importance to the economy, one criticism that was raised by some respondents, both in the business sector and in government, is the failure to publish the discussions, which would have given them some measure of permanency.

In the University of Zimbabwe, the Department of Economics has occasional seminars, some of which have attracted policy makers in Government and executives in the business community. Staff of the Department can also present their views on any aspect of the economy at the monthly meetings of the Zimbabwe Economic Society. However, some respondents at the University have expressed the feeling that the leadership of this organization is too political, and that the discussions of the society have been over-politicized by its members, many of whom are non-economists from outside the campus.

As far as academic research is concerned, a look at the volume over the past ten years or so does suggest that it has dropped. This has been due to several factors, including a reduction in research funds from donor agencies and a gradual shift from academic research to consultancies which have greater pecuniary benefits.

Table 23 gives a summary of the position with respect to seminars, research, and public debates. Appendix II provides a list of some of the research projects undertaken by members of staff in the various departments of economics.

Table 23 Seminars, research and public debates

University	Seminars	Research	Sources of funding	Debates
Addis Ababa	1. Regular based on academic research 2. Through IDR between researchers	1. Through IDR 2. IDR has research plan 3. Regular interaction	1. Diverse foreign sources, e.g. • IDRC • Ford Foundation • WHO • UNICEF	
Nairobi	1. Staff seminars, not regular 2. Graduate student seminars	1. No Department research plan 2. Regular interaction of researchers at KEA meetings 3. Good number of research projects 4. Consultancy gaining ground	1. IDRC 2. UNICEF 3. Rockefeller Foundation 4. Ford Foundation	1. Regular 2. Through KEA
Dar es Salaam	1. Staff seminars regular 2. Graduate students' seminar, regular 3. Alliance-government seminars, regular	1. Small number of research projects 2. Consultancies abundant	1. AERC 2. IDRC 3. World Bank 4. Ford Foundation	1. Lively when conditions warrant 2. Currently few
Zambia	1. Staff seminars, not regular 2. Graduate student seminar, regular	1. No Dept. research plan 2. Little interaction on individual research 3. Limited research 4. Consultancy gaining ground	1. AERC 2. IDRC 3. Ford Foundation 4. UNICEF	1. Regular 2. Through Zambia Economics Society
Zimbabwe	1. Occasional Department seminars 2. Mostly verbal presentation	1. No Department research plan 2. Little interaction on individual research 3. Limited amount of research 4. Consultancy gaining ground	1. SAREC 2. Rockefeller Foundation	1. Regular 2. Through Zimbabwe Economic Society

Conditions of life

Evidence collected in this study suggests that the incentive structure at the various universities visited is not competitive. Several other alternative employment opportunities are available within the region that have much better terms of service. In fact, the departments of economics in the universities have lost several of their good scholars to other institutions and organizations that offer greener pastures.

It has, however, been argued by several respondents that one factor that can act as a strong incentive to staying in academia, in spite of the poor remuneration, is the recognition and respect accorded to scholars when they are involved in the national decision-making process. It is argued that greater collaboration between these scholars and those involved in the decision-making process in government would, in itself, be a very important source of satisfaction. The scholar then feels that his expertise is recognized, respected, and valued, and that he is involved in shaping the destiny of his country. Asked to cite a good example, non-Tanzanian respondents gave the example of the University of Dar es Salaam where, they argue, although the remuneration package is far from attractive, the rate of retention of academic staff is the highest in the region. One of the principal reasons, they argue, is the recognition accorded these scholars and their intimate involvement in shaping the development of their country.

Well-organized regular monthly seminars based on discussion of issues of national importance are also important in sowing the seeds of co-operation between the two groups. Through the various country economic associations/societies, policy makers and university intellectuals have had opportunities to interact, share views, get to know each other, and to some extent to enter into collaborative work, but a complete breakthrough in this area is yet to be made.

VIII. The incentive structure

In our attempts to provide a comprehensive coverage of the factors that influence the motivation of a scholar in his academic functions in the university, a distinction is made between pecuniary incentives on the one hand, and professional incentives on the other. The term "pecuniary incentives" has been used to cover the remuneration package and the other benefits which are normally included in the terms of service such as housing or housing allowance, medical benefits, transportation facilities and other material benefits. On the other hand, the term "professional incentive" is used here to cover the general academic environment. In this respect, it is argued that although a university may not have a very attractive and competitive remuneration package and other material benefits, a scholar may still continue to provide his professional services to it owing to the existence of a good library, adequate computing facilities, sufficient research funds, and frequent academic interaction through conferences, seminars and workshops. Of course, the ideal situation is where both the pecuniary and the professional incentives are attractive and competitive.

In all the countries visited, university salaries were much lower than those offered in the private sector. Although, in general, governments pay lower salaries than the private sector, an employee with the qualifications of a university lecturer or professor would normally have this seniority recognized and be awarded a higher salary then his counterpart in the university. This means that both the private sector and the government offer better salaries than the university for the same qualifications.

Apart from salaries, employees are often entitled to other benefits, the main ones being housing and medical services. In Addis Ababa University, no teaching staff are provided with housing, and in Zimbabwe and Zambia only foreign teaching staff are housed. In the University of Nairobi, salaries are higher than those at Dar es Salaam and the academic staff are offered highly subsidized housing or a large housing allowance. In order to retain local teaching staff and simultaneously encourage them to own houses, University of Nairobi staff are paid an owner-occupier housing allowance which is equivalent to about 50 percent of their salaries. The same staff are entitled to free medical benefits, car loans, and a waiver of duty and sales taxes on new cars upon returning from overseas study.

Due to its locational advantage, the University of Nairobi has easy access to

the international donor agencies that offer funds for various educational activities, including books, journals, research, seminars and workshops. Although in the late 1960s and 1970s these activities received large financial allocations, today such allocations have shrunk by a very significant margin. Because of this, and the continuously increasing cost of living which is unmatched by corresponding changes in the salary structure, academic staff are turning to consultancy work.

As far as medical services are concerned, Addis Ababa University and the University of Zambia have no free medical benefits. Both the University of Zimbabwe and the University of Nairobi provide free medical services to their teaching staff.

Apart from these benefits, the general conditions of life can be an important parameter in the decision to continue staying in a particular university or to leave. Some of the respondents interviewed have referred to the following factors: a difficult political climate, sometimes bordering on dictatorship; compulsory participation in many political activities, failing which the individual might face victimization; rapidly increasing cost of living; and lack of many consumer goods, some of which are necessities.

The case of Dar es Salaam is unique. Even within the Faculty of Arts in the University, the Department of Economics has been the most stable with the highest staff retention rate. Table 24 provides data on staff losses between 1984 and 1989 for the different departments in the Faculty of Arts.

Table 24 Staff losses in the Faculty of Arts, University of Dar es Salaam, 1986–1989

Department	Establishment	Staff on leave of absence	Staff lost
1. Economics	28	3	0
2. History	15	2	2
3. Sociology	15	4	2
4. Foreign language and communicating skill	25	2	–
5. Swahili	13	2	–
6. Political science	–	5	4
7. Geography	15	3	5
8. Literature	12	3	3

Source: Faculty of Arts, University of Dar es Salaam.

The main explanation for this high retention rate, despite a relatively poor remuneration package and other benefits, is professional incentive. Although comparative data on the degree of involvement of academic staff in the decision-making process in government were not collected across the region, it would appear that Dar es Salaam would easily take the lead in this respect.

One of the academic staff interviewed at Dar es Salaam stated that:

> " . . the degree of job satisfaction in our department is very high. We work very closely with the Economic Research Bureau and the Government decision making body. The Government has a high respect for us as expert advisors. We have no problem with research funds. Consultancies are abundant. Computing facilities are available in satisfactory amounts . . ."

The same feeling has been articulated by academic staff in other departments in the Faculty of Arts as well as executives in Government. They have argued that among the principal factors determining the high retention rate at the Department of Economics in Dar es Salaam are the degree of involvement of staff in the decision-making process in Government, the recognition and respect accorded these scholars as experts in their areas of specialization, the opportunity they are offered to help in shaping the destiny of their country, and the abundance of research funds and consultancies and the financial benefits accruing from these academic activities. One senior member of staff in the Department estimates the annual income accruing from consultancies and remunerative research to be between TSh 3,000,000 and TSh 5,000,000 (equivalent to US$20,000–33,000 in mid-1989). However, putting aside the financial benefits enjoyed by these scholars, opportunities for regular collaborative work between the two groups, and the incorporation of these scholars' ideas into the decision-making process in Government, is in itself a very important source of satisfaction.

One cannot say with certainty whether a similar relationship between the decision-making machinery in government and university departments would produce the same results in other countries in the region. What is clear is that the right mix of incentives is likely to induce academic staff to stay longer in the same academic institution, and to perform their functions with greater interest, motivation and dedication. Therefore, we recommend the establishment of such a relationship as one means of dealing with the problem of lack of staff motivation and retention.

In this respect, the activities of the AERC are certainly an excellent catalyst in the right direction. AERC is well placed not only to evaluate what has already been achieved but, if it moves cautiously, it could also succeed in forging new links between academia and government in the countries of the region.

IX. The demand and supply situation

It should be stated from the outset that information given in this section is by no means comprehensive or precise. Exact information on the demand and supply conditions in all the countries studied would have required a much longer period and an enormous amount of resources, both of which were not available. The main objective of this study, however, was to obtain a rough idea of the balance between demand and supply of graduate economists in the countries visited. In order to accomplish this task, we were careful to select respondents in positions that give them a good idea about the whole economy. They were therefore competent to make a rough estimate of the balance between demand and supply conditions at the time of the interview. In addition, with their knowledge, they were best placed to provide the corresponding projections of demand for the following three to five years.

In Ethiopia, three departments were visited: the Ministry of Finance, the National Bank, and the Ethiopian Management Institute. At the time of interview, the Ministry of Finance had some graduates from Cuba, Hungary, and the USSR whose qualifications were not clear since they were very poor in the execution of the functions required of them. According to the Ministry executive, they had severe English language problems, their knowledge of economics was close to nil, and they were unable to write coherent reports. However, the Ministry had plans to secure graduates with MAs in economics at the rate of seven every year for the next five years. A large percentage of these candidates were expected to train in the USA or the UK.

Although in the Ethiopian National Bank the majority of the economists have BA degrees, the Bank has a seven-year manpower development plan requiring the supply of seven PhDs and 11 MAs in economics. Since the specializations required by the Bank are not offered at Addis Ababa University, the Bank expects to secure the required scholarships from the UK, USA and India.

In Zambia, a total of nine executives from the Government and business community were interviewed. According to the executive interviewed in the Bank of Zambia, the bank had one employee with a PhD and nine with master's degrees in economics, and a total of six were undergoing graduate training in the USA and Britain. According to their manpower development plan, the Bank's future demand was placed at an annual average of 2–3 graduates with MAs over the next five years. In addition, their estimates for the entire government sector

put the demand for economists at 36 MA graduates every year for the next three years.

The next set of estimates was provided by an executive in the Prices and Incomes Commission. According to this respondent, the general policy of the Commission is to employ graduates with an MA in economics, and upgrade those with BAs to MAs through provision of scholarships tenable abroad. In addition, according to data in their files at the time of interview, the Commission had 13 graduates with MAs and had a projected demand of 19 MA graduates in the following five years. As a policy, the Commission normally provides its employees with foreign scholarships to enable them to undertake their MA degrees abroad. In addition, most of the Commission's graduates received their education from the UK and the USA.

Interviews with executives from the National Commission for Planning, the Cabinet Office, the Directorate of Manpower Development and Training, and the Central Statistical Office all suggested that there is a significant demand for graduates with MAs in economics; that most departments with a demand for MA graduates send their employees abroad on foreign scholarships to obtain these degrees; that most of the graduates with MA degrees who are already employed in the various departments obtained their training from the UK and the USA; and that most of those who were undergoing their training at the time of the interview were receiving such training in those same countries. Estimates of demand for graduates with degrees in economics for the entire Government sector varied between 30 and 45.

The same trend was observed for the private sector where a total of three company executives were interviewed. The Zambia Industrial and Mining Corporation Limited (ZIMCO) is a large corporation with a total of 133 employeeswith some training in economics. According to the executive interviewed, the company is structured in such a way that it has specific positions whose functions can only be efficiently executed by graduates with an MA in economics. Moreover, the employee would need to have covered the specific specialization required by the department in question. For instance, project managers are required to have specialized in project evaluation and analysis, and heads of the research and development department are required to have a good knowledge of economic theory, quantitative economics, and research methodology.

At the time of the interview, ZIMCO had 30 graduates with MAs or MBAs in economics and, according to their manpower plan, demand for the following five years was placed at an average of four every year. In ZIMCO also, most of the graduates had received their training from the UK and the USA, and those currently training are in those countries.

The second company visited, ZIMCOM, has about 100 employees, and the third, Mutende International Zambia Ltd., is smaller than the other two. However, both these companies repeated the same story of demand for graduates in economics. Although smaller than ZIMCO, Mutende had four graduates

with MAs: two are engineers, and two are economists. Three of them were trained abroad (UK, Canada, and Germany). According to Mutende's manpower plan, they will be needing one MA in economics every other year for the next six years.

With the temporary suspension of the graduate training programme in economics at the University of Zambia, the output is currently nil. This means that the graduates needed by government and the private sector must come from abroad, at least for the time being.

In Zimbabwe, information on the demand situation was collected from three Government departments and one company. The Ministry of Finance had a total of six graduates with MAs and one with a PhD in economics. These figures were corroborated by data at the National Planning Agency whose estimates put the demand for economists with MAs at seven every year for the next five years.

The next Government department visited was the Reserve Bank. The Bank had a total of seven graduates with MAs in economics and has plans to secure two MA graduates every year for the next five years. In order to realize this objective, the Bank provides scholarships to its employees, most of which are tenable in the USA or the UK.

The only private company visited in Zimbabwe was the Confederation of Zimbabwe Industries. The Confederation has a payroll of close to 1,000, and at the time of the interview employed a total of 159 graduates with MBAs and MAs in economics. The Confederation estimates that it will need a total of 15 MA and MBA graduates every year for the next five years. However, it is interesting that the Confederation does not spend much of its resources on graduate training: it simply poaches suitable graduates from Government and the University as it has a much better remuneration package.

The corresponding supply from the University of Zimbabwe, earlier given as seven graduates every year, is much below the demand that appears to exist in the country. This is most probably the main reason why both the private and Government sectors have independent arrangements to secure foreign scholarships which enable them to send their employees for graduate training outside the country.

From the foregoing discussions covering Ethiopia, Zambia, and Zimbabwe, indications are that the demand for graduates with an MA in economics far outstrips local supply of such graduates. Even if we assume that the demand figures have been exaggerated and scale down the figures by 50 percent, the demand would still exceed local supply. In addition, it would be difficult to explain why department after department and company after company have independent arrangements for training their employees abroad if they could secure the same graduates from local universities at no cost. Table 25 summarizes the sketchy information on demand and supply collected from the departments and companies visited.

Table 25 Three-year demand and supply conditions, 1990/91–1992/93

Country		Demand	Supply	Excess demand
Ethiopia				
(i)	Two departments	28		
(ii)	University ot Addis	6		
	Total	34	24	12
Kenya				
(i)	Public and private	90		
(ii)	Two universities	12		
	Total	102	39	63
Tanzania				
One university		3 (PhD)	4 (PhD)	
Zambia				
(i)	Government	38		
(ii)	Private sector	8		
(iii)	University	6		
	Total	52	3	49
Zimbabwe				
(i)	Government	27		
(ii)	Private (1 company)	6		
(iii)	University	3		
	Total	36	24	12

Sources: 1. AERC Training Task Force.
2. Files from various departments of government and the private sector.
3. Interviews with officials and company executives.

X. Recommendations

The results of the investigations and discussions covered in this report suggest that demand for graduates in economics in the countries covered is far in excess of the supply from local institutions. The discussions further suggest that the various universities face numerous problems while executing their function of producing graduates. Among these are shortages of teaching staff, poor infrastructure, and a poor incentive structure and intellectual environment.

How do we improve this situation? On the basis of discussions with and suggestions made by the different respondents interviewed, a set of five recommendations emerges. These recommendations are discussed below.

Recommendation 1: Staffing

The recommendation

Since all the departments of economics visited had vacant positions in their establishments, it is recommended that, with the help of donor agencies, these positions be filled by foreigners on a contractual basis while the universities vigorously pursue staff development programmes aimed at replacing the foreigners on completion of their training. In addition, since the size of the establishments was found to create a FTSE: staff ratio considerably higher than was the UNESCO-recommended ratio, it is recommended that these establishments be revised upwards so as to lower the FTSE ratio to 12–15. This would guarantee a teaching and supervision load that allows reasonable time for research.

Issues to be considered

Although this recommendation may look attractive, several related issues must be seriously considered. The concept and practice of staff development programmes is not new in this region. Donor agencies have provided millions of dollars towards such programmes in almost every university in the region in the past decade and a half. Yet it would not be far off the mark to say that about 70 percent of the professors who have gone through this programme in the last 15 years have since left the universities and are working elsewhere at a time when

their services are most needed in the universities. Among the reasons for this are the incentive structure and the general socio-political environment. What guarantee do we now have that such a programme would work this time?

Recommendation 2: Infrastructure

The recommendation

The infrastructure in the various universities visited was found to be poor and continues to deteriorate. To deal with this problem, it is recommended that the various governments, with supplementary assistance from donor agencies, should provide regular funds for the provision of up-to-date books and journals, and for computing facilities and other infrastructural requirements.

Issues to be considered

Among the main reasons why university infrastructure has suffered during the last decade or so is lack of sufficient funding from the parent government. Donor assistance has also dwindled. The question that needs to be answered is, with the various economies in the region steadily declining, and with the numbers of universities in the region multiplying and therefore imposing heavier financial burdens on the same governments, what are the probabilities that these governments will provide larger amounts of funding to sustain the required standard of infrastructure?

Recommendation 3: The incentive structure

The recommendation

Discussions in the relevant section of this report suggested that incentive structures in the universities in the region are not sufficiently attractive, nor are they competitive with the private sector and the international institutions which have often poached staff from the universities. Therefore, it is recommended that the whole spectrum of incentives at the universities in the region be overhauled. Suggestions are made on the following:

- an upward revision of the salary structure so as to make it competitive;
- provision of free housing or a reasonable housing allowance;
- provision of free medical services; and
- a soft-loan arrangement for securing means of transportation as well as a transportation allowance for staff who are forced to live far away from the university.

Issues to be considered

The main issue that needs consideration here is the funding necessary for overhauling the incentive structure. The recurrent expenditure involved is likely to run into millions of dollars per university every month. The probability of securing such funds seems low.

Recommendation 4: Intellectual environment

The recommendation

This recommendation calls for the encouragement and intensification of research, seminars, and debates focusing on issues of national and regional importance.

Issues to be considered

One of the reasons why academic staff are slowly drifting from intellectual research into consultancy is poor remuneration at the university. Moreover, if seminars and debates are to be fruitful, they need to be based on sound research data. This calls for time and adequate infrastructure. The scholar needs time to devote to his research. However, where the staffing situation is poor and the scholar is forced to carry a disproportionately heavy teaching and supervision load, he will have very little time and energy left for research. In addition, if the infrastructure is poor, the quality of his research, and therefore of seminars and debates, is bound to suffer.

It is clear, therefore, that these factors are mutually interrelated, so that if we wish to establish a good intellectual environment we must simultaneously make sure that staffing problems, infrastructure problems, and the incentive structure are all taken care of.

Recommendation 5: Postgraduate training programme

The recommendation

This recommendation proposes a postgraduate programme which can cater for graduate training needs in the region. Proponents of this recommendation suggest that students and staff manning the programme could be drawn from the region. They argue that the regional character of such a programme has many advantages, three of which are given here. First, such a programme is likely to prove cost-effective; second, it would be a contribution towards regional co-operation; and, third, bringing together students and professors of diverse backgrounds and experience is bound to widen their knowledge and outlook on regional economies. In addition, if students were to be required to write their theses on their home economies, this wider knowledge of the various economies in

the region would be extremely valuable. It is also suggested that staff drawn into this programme should be selected on merit, and that they would be employed on a contractual basis. The incentive structure would be made competitive by any standards. It is proposed that the incentive structure be designed in such a manner that staff would have no reason to engage in petty business, formal or informal, that would consume time they are supposed to devote to teaching, supervision, and research. Infrastructural facilities should also be up to date.

Proponents of such a programme suggest that it should be implemented with caution. Each step should be carefully calculated and thoroughly evaluated. First and foremost, a training body needs to be established to look into the issue in greater detail. This body would need to conduct seminars with participants from all over the region to discuss regional training needs and take a critical look at graduate curricula and the desirability of the proposed regional programme. This body would then make recommendations and give advice.

Issues to be considered

Several issues need to be considered in relation to this recommendation. The first is the issue of funding. Where would the required funds come from? The second issue relates to the lessons we need to learn from regional efforts that have been started in the past and failed. The reasons for these failed efforts need to be studied.

A final suggestion made was that such an effort should initially be small and purely experimental. Only if the beginning shows signs of success should the programme be gradually and cautiously expanded.

XI. Conclusions

This study, conducted over a period of approximately a month, collected data from Ethiopia, Kenya, Tanzania, Zambia, and Zimbabwe. The data collected from the universities in the countries suggest that graduate degree programmes in the region face several problems whose solutions are out of sight. Among these are staffing problems, problems of infrastructure, and a poor incentive structure. Although demand for graduates with master's degrees in economics was found to be significant, the universities were found to be unable to satisfy that demand.

In order to resolve these problems, several suggestions have been made. The first four relate to the improvement of infrastructure; overhauling of the incentive structure; improvement of the intellectual environment; and the recruitment of additional teaching staff, intensification of staff development programmes and the upward revision of staff establishments. A close look at these four propositions suggests that the probability of making the suggested improvements is very low owing to the scarcity of required funding.

The final suggestion was the establishment of a regional graduate programme in economics on a cautious experimental basis. Given the enormous problems that universities face today, it might be worth while to venture into such a programme, provided that this was done with the necessary caution.

Appendix I

List of MA dissertation titles

Addis Ababa University

1. Social Returns from Research Extension of Wheat and Barley in Arrsi Region of Ethiopia, 1985
2. Study of Factors Affecting the Use of Agricultural Credit Among Peasant Farmers in Ethiopia, 1987
3. Measuring Economic Efficiency: A Case Study of State Owned Textile Industries in Ethiopia, 1987
4. Cattle Marketing Systems: From Farm to Slaughter House, 1988
5. The Development of Agricultural Producers' Cooperatives in Ethiopia: The Case of Arrsi Region, 1989
6. Income Distribution and Consumption Patterns in Rural Ethiopia: A Statistical Analysis of Family Budget, 1989
7. The Role of Metal Industry in the Ethiopian Economy and Factors Influencing Productivity, 1989
8. Mobilization and Utilization of Funds by the Commercial Bank System in Ethiopia, 1989

University of Zimbabwe

1. Formal Financial Institutions and their Performance in the Communal Areas of Zimbabwe: A Case Study of Mhondoro Communal Area, 1986
2. Recent Changes in the International Monetary System and the Implications for Developing Countries, 1986
3. The Medium Term Forecast on the Budget as a Precondition for Improving the Relationship between Planning the Budgetary Process in Zimbabwe, 1986
4. The Use of the State Owned Sector in the Planning Process in Zimbabwe, 1986
5. Growth Point Approach to Rural Development: Sanyati Case Study, 1988
6. Effective Tariffs in Zimbabwe, 1988
7. Income Distribution in a Dual Economy: Case of Zimbabwe, 1988

University of Nairobi

1. A Disequilibrium Model with Rationing in Two Markets, 1985
2. Rural Industrialization and the Food Problem: A Case Study of Mumias Sugar Scheme, 1985
3. Production and Utilization of Teachers for Secondary Schools in Kenya: An Economic Evaluation, 1985
4. An Exploration Towards an Inflation Index for Kenya, 1985
5. Reserve Ratios as Monetary Policy Instruments in Kenya, 1985
6. An Economic Analysis of Monetary Relations in Kenya: 1968–1983, 1985
7. The Manufacture and Importation of Handtools and Cutlery in Kenya, 1985
8. The Pharmaceutical Industry in Kenya, 1985
9. The Structure and Economic Impacts of Maritime Transport in Kenya, 1985
10. Waste-Product Utilization in Kenya: Waste-Oil Recycling and Furfural Production, 1986
11. Factor Substitution Possibilities and the Unemployment Problem in Kenya's Large-Scale Farm Sub-sector, 1986
12. Factor Substitution in Kenya's Manufacturing Sector: A Duality Approach, 1986
13. Impact of Export Expansion in Kenya: A Social Accounting Approach, 1986
14. An Economic Analysis of Fresh Water Fish Marketing on the Landing Beaches of Lake Victoria (Kenya), 1986
15. Pattern and Determination of Adaption of Livestock Innovations in Uganda: A Case Study of Kyadonbo[? sp] County, 1986
16. An Economic Analysis of the Kenyan Sisal Industry, 1987
17. External Shocks, Adjustment Policies and the Debt Problem in Kenya, 1974–1986, 1987
18. An Analysis of Rice Marketing in Kenya: A Case Study of Kano Plains, 1987
19. Determinants of Earnings in the Urban Informal Sector: A Case Study of Mechanics in Nairobi, 1987
20. Public Sector Investment in Kenya's Primary and Secondary Education: Recurrent Cost Implications, 1987
21. Auto-Ancillary Industry in Kenya: Leafspring, Exhaust Systems, Filters, Radiators, Brake Pads and Batteries, 1987
22. Determinants of Kenya's Manufactured Exports: An Empirical Analysis, 1987
23. The Demand for an Illegal Commodity: A Case Study of Chang'aa Consumption in Nairobi's Mbotela Estate, 1987
24. Smallholders Contract Farming in Kenya's Sugar Industry: A Case Study of Nzoia Sugar Scheme, 1987
25. Incentives for Increased Production of Edible Oil Crops in Kenya, 1987
26. Choice of Commuting Modes in an Urban Sector: A Case Study of Nairobi City
27. Demand for Gasoline and Light Diesel in Kenya, 1987

Appendix II

List of research projects

Addis Ababa University (IDR and Economics Department)

1. Inter-disciplinary research on rural development, 17 research projects
2. Research on the food crisis in Africa: The case of Ethiopia, 9 research projects
3. Famine experience and resettlements in Ethiopia, 16 research projects
4. The camel as a food system in Ethiopia, 11 research projects

University of Zambia

1. The rehabilitation of the Zambian industrial sector for employment generation
2. Structural adjustment with a human face: the case of Zambia
3. The nature and impact of agro-based industries in Zambia
4. The character and impact of the informal financial system on Zambian macro policy
5. The impact of liberalization policy on the Zambian economy

University of Nairobi

1. An economic evaluation of contract farming among out-growers in Kenya
2. The informal retail business as a survival strategy of the urban poor
3. How Kenya can maximize its benefits from the PTA
4. The nature, impact, and implications of Kenya's industrialization strategies
5. Urban slum enterprises as a survival strategy of the urban poor in Nairobi
6. An economic evaluation of the handicraft industry in Kenya
7. Management versus other factors in African economic development
8. Factor intensity reversals in Kenya's manufacturing sector
9. Biotechnological development and innovations
10. Appropriate productive employment
11. The problem of urbanization and growth in the City of Nairobi
12. The economics of integration among developing countries, with special reference to the PTA
13. Economic and financial analysis of urban and rural water supply schemes
14. Planning for investment on low-income housing in Kenya

15. The controllability of money in Kenya
16. Domestic resource mobilization in Kenya